

ASA

BULLETIN

MARCH, 1932 IN TWO PARTS VOLUME 3, NO. 3
PART I

The Standardization Work of the Detroit Edison Company	85
Underwriters' Laboratories Standards for Wiring Devices	97
New Members of ASA Board of Directors	99
A.S.S.E. Representative on Standards Council	99
Mining Committee Holds Annual Meeting	100
ASA Projects	102
A Review of Civil Engineering Projects under ASA Procedure	102
Committee to Standardize Lathe Tool Nomenclature ..	108
Interim Changes in the National Electrical Code	109
Method for Classifying Coals Proposed at Meeting ..	109
Foreign Standards Available from ASA	110

ASA MEMBER-BODIES

AM. ELECTRIC RAILWAY ASSN.	INSTITUTE OF RADIO ENGRS.
AM. GAS ASSN.	INTERNAT'L ACETYLENE ASSN.
AM. GEAR MFRS. ASSN.	LIGHT METALS GROUP:
AM. HOME ECONOMICS ASSN.	ALUMINUM CO. OF AM.
AM. INSTITUTE OF ARCHITECTS	MFRS. STANDARDIZATION SOC. OF
AM. INSTITUTE OF ELEC. ENGRS.	THE VALVE AND FITTINGS IND.
AM. INSTITUTE OF MINING & MET-	NAT'L ASSN. OF MUTUAL CASUALTY
ALLURGICAL ENGRS.	COMPANIES
AM. MINING CONGRESS	NAT'L BUR. OF CASUALTY AND
AM. RAILWAY ASSN.	SURETY UNDERWRITERS
AM. SOC. OF CIVIL ENGRS.	NAT'L COAL ASSN.
AM. SOC. OF MECHANICAL ENGRS.	NAT'L ELECTRICAL MFRS. ASSN.
AM. SOC. OF SANITARY ENGINEERING	NAT'L MACHINE TOOL BUILDERS'
AM. SOC. FOR TESTING MATERIALS	ASSN.
ASSN. OF AM. STEEL MFRS. TECH-	NAT'L SAFETY COUNCIL
NICAL COMMITTEE	THE PANAMA CANAL
CAST IRON PIPE RESEARCH ASSN.	RADIO MFRS. ASSN., INC.
ELECTRIC LIGHT AND POWER GROUP:	SOC. OF AUTOMOTIVE ENGRS.
ASSN. OF EDISON ILLUMINATING	TELEPHONE GROUP:
COMPANIES	BELL TELEPHONE SYSTEM
NAT'L ELECTRIC LIGHT ASSN.	U. S. INDEPENDENT TEL. ASSN.
FIRE PROTECTION GROUP:	U. S. DEPARTMENT OF AGRICULTURE
ASSOCIATED FACTORY MUTUAL	U. S. DEPARTMENT OF COMMERCE
FIRE INSURANCE COMPANIES	U. S. DEPARTMENT OF INTERIOR
NAT'L BOARD OF FIRE UNDER-	U. S. DEPARTMENT OF LABOR
WRITERS	U. S. GOVT. PRINTING OFFICE
NAT'L FIRE PROTECTION ASSN.	U. S. NAVY DEPARTMENT
UNDERWRITERS' LABORATORIES	U. S. WAR DEPARTMENT

OFFICERS

Bancroft Gherardi	<i>President</i>
Cloyd M. Chapman	<i>Vice-President</i>
P. G. Agnew	<i>Secretary</i>
Cyril Ainsworth	<i>Assistant Secretary</i>
Arthur Kallet	<i>Editor</i>
Ruth E. Mason	<i>Assistant Editor</i>

The Standardization Work of the Detroit Edison Company

by

F. M. Price, *Editor*
Standards Catalog

The organization of standardization work and allocation of responsibilities; operation; a description of the Standards Catalog and the Master Standards Catalog File

The story of the standardization work of the Detroit Edison Company, the first part of which was published in the February issue of the ASA BULLETIN, is continued in the following pages. The concluding part will appear in the April issue.

5

Organization and Responsibilities

This chapter deals specifically with the organization of the various standardizing units and their responsibilities. The organization started with the appointment of the Main Committee by the management of the company and has been expanded, as required, since that time.

Main Committee

The authority for all of the standardization activities within the company is vested in a Main Committee. This group is composed of the Chief Engineer, the General Storekeeper, and the Purchasing Agent. They are charged with the responsibility of establishing the broad policies to be followed. The Main (or guiding) Committee is also empowered to establish subcommittees to study and standardize specific classes of materials. This committee also must approve all subcommittee recommendations before they are adopted as standard.

Subcommittees

The subcommittees appointed by the Main Committee to study specifically assigned materials are composed of representatives from all departments concerned with the use of the materials. Represented in these groups are men from the following interested divisions of the company:

- (a). Stores
- (b). Purchasing (Order Group)
- (c). Standards Group

- (d). Design
- (e). Research
- (f). Production
- (g). Operating
- (h). Construction
- (i). Maintenance
- (j). Shop Men
- (k). Field Men

For each subcommittee a chairman is appointed whose knowledge and experience especially equip him for the position. He is privileged to appoint additional members at his own discretion. Usually these additional members are drafted temporarily to give information relative to some item with which they are particularly familiar.

The editor of the *Standards Catalog* is a member ex-officio of all subcommittees.

Classification subcommittee—It was recognized by the Main Committee that very little could be done either in the matter of standardization or appointing subcommittees until a classification of materials was definitely established. For this reason the Classification Subcommittee was formed immediately following the creation of the Main Committee. Representatives from the Stores, Accounting, and Purchasing Departments were assigned to this work.

Scope subcommittee—A subcommittee composed of six executives representing Stores, Purchasing, Engineering, Design, Accounting, and Production was appointed by the Main Committee to pass upon the scope of each proposed standardization project. The editor of the *Standards Catalog* is also a member of this subcommittee. These individuals are charged with the responsibility of determining the extent to which a subcommittee should go in the standardization of a particular class of material. Theirs is the task of determining the feasibility of a proposed undertaking. Their decision is based on a study of the probable cost of the

undertaking and the possible ultimate savings to accrue from the suggested enterprise. A savings must be apparent for a proposed project to be reported upon favorably.

If a proposal is made to the Main Committee that a group be appointed to standardize a certain class of material, the matter is referred to the Scope Subcommittee. They in turn investigate and make recommendations to the Main Committee as to whether or not it would be advisable to form such a group.

Standards Catalog publishing subcommittee—The Standards Catalog Publishing Subcommittee was created to decide upon all questions pertaining to the presentation of the approved standards in convenient and usable form. This group is composed of the personal representative of each member of the Main Committee and the editor of the *Standards Catalog*. The subcommittee members concern themselves with decisions pertaining to the size of the catalog, kind of paper, type of binders, type family, costs, general catalog arrangement, and other general subjects. The details of printing are left entirely to the editor and his staff.

Standards Catalog Group

Under the supervision of the editor of the *Standards Catalog* is a group which acts as the clearing house for standardization. Functionally, the group was organized to publish the book of standards and assist subcommittees in the preparation of their final reports. The division is composed of an editor, three engineers acting as assistant editors, a commercial artist, and two typists.

6

Operation

In the preceding chapters there has been presented a sketch of how the various groups were organized, their responsibilities, and how as a whole they accomplished certain objectives.

This chapter will tell how some of these units have operated or functioned during the carrying on of their standardization work.

Main Committee

General policies—Immediately following the appointment of the Main Committee, the members decided upon the general policies to be followed with respect to the standardization program. These were evolved after a study of the conditions to be corrected. The second chapter outlines these conditions. The aims and policies as finally decided upon are presented in the third chapter.

Appointment of subcommittees—Realizing the hopelessness of attempting to get along without some definite workable materials grouping, a classification subcommittee was created. Other appointments consisted of the scope subcommittee, the publishing subcommittee, and the subcommittees to standardize particular classes of material. Following is a list of all of the subcommittees which have been appointed to assist with the standardization work to date, together with the materials which they are considering:

1. Classification
2. Scope
3. Standards Catalog Publishing
4. Pipe and Fittings
 - Pipe and tubing
 - Pipe fittings
 - Piping specialties and plumbing fixtures
 - Valves
5. Wire and Cable
 - Wire and cable conductors
6. Building Materials
 - Masonry
 - Lumber
 - Paints and other protective coatings
 - Glass and glazing materials
 - Builders hardware
 - Reinforcing steel
 - Hot rolled steel sections
7. Packing
 - Packing and gaskets
8. Tools and General Hardware
 - Tools
 - Iron and steel wire
 - Tool steel and special iron and steel
 - Chain, rope, cord, etc.
 - General hardware
9. Carbon Brushes
10. Relays and Insulators
 - Relays
 - Insulators and other electric insulation
11. Firebrick
 - Firebrick and other refractories
12. Stokers
 - Stoker castings
13. Chemicals
 - Chemicals, drugs, and compounds
14. Fasteners
 - Bolts, screws, nails, rivets, etc.
15. Wiring Supplies
16. Lamps
17. Office Equipment and Stationery Supplies
18. Castings
19. Mechanical Instruments and Gages
 - Mechanical control apparatus
 - Mechanical measuring instruments

Meetings of Main Committee—The members of the Main Committee hold meetings at irregular intervals to review the progress of standardization. At times the entire group of subcommittee chairmen are called in for a round-table discussion with the Main Committee. This policy permits an exchange of ideas on questions of procedure.

Approval of subcommittee reports—All subcommittee reports are in the nature of recommendations to the Main Committee. In approving the subcommittee reports the members of the Main Committee are usually governed by the fact that in appointing the members of the subcommittee the men most competent to form the standard are chosen. For this reason the proposed standard is merely given a cursory check to detect any violations of general company policy.

How subcommittees function

Material furnished to members—Before a subcommittee can advantageously begin the study and standardization of a class of material, there is some information with which they should be supplied. These data are furnished by the members representing the Stores Department, Purchasing Department, and the Standards Group.

Subcommittees are furnished by the Standards Catalog Group with a complete list of the items in each class of material they are called upon to standardize. This initial list is a purchase record of all items purchased. The standards engineer furnishes the subcommittee also with a complete file of existing standards and purchasing specifications from recognized sources.

The Stores Department representative is prepared to advise the members as to which of the items are carried in stock and what people are using them. Where practicable he is also prepared to submit for examination those stock items which the members consider it advisable to have.

The buyer from the Purchasing Department procures the new items which the subcommittee members believe have merit for our service. He is also prepared to inform them as to the prices and availability of the various items under consideration.

Methods—It is impossible to establish a single procedure to be followed by all subcommittees in their work of standardization. Broadly, they are governed by the general policies as set forth in some of the preceding paragraphs. The detailed methods of accomplishing these aims, however, vary with the type of material being standardized. There are two generally accepted methods of attack. The first of these might be

called the "individual item" or "direct" method. The second procedure could be labelled the "indirect" system.

Individual item method—This method is used by those subcommittees which are considering a group of items, each of which is more or less complete by itself. Consider the task of standardizing tools as an example. Each individual item can be dealt with on its own merits separately, with little thought being given to the other items in the class. There is little relation existing between the items. A few exceptions to this rule exist. Tools to be used with other items should be checked to see that the selection of sizes of the two items correspond. For instance, taps and dies should be so chosen in size so that for every die there is a tap, and vice versa. Also there is a relation between the drill sizes selected and the taps. A tap would be difficult to use without proper thread and body drills. Open-end wrenches should be chosen to fit the nuts and heads of bolts selected as standard. However, as a general rule little relation exists between the items.

A plan of attack well adapted to the "tools" type of class is to assign individual items to each member of the subcommittee for investigation. These are thoroughly studied and the recommendations of the individual are offered at the next weekly meeting for an open forum discussion. Their recommendations provide justification for the item or present reasons why it should be eliminated. Justification for an item involves an affirmative answer to the question of whether or not the item is necessary to this company. This question is usually decided by the representatives of the departments concerned with the use of the material. It also must be the best item for the service intended, price, quality, and other factors involved having been duly considered. The buyer and other interested individuals have an opportunity to present improved or different items as a substitute for the one under consideration during the investigation to determine which item is best for the job.

If the item is justified, the name is examined with a view to making it conform more nearly with the accepted principles of correct terminology. Sizes are reviewed to ascertain what the possibilities of elimination are. An attempt is made to provide a uniformly graduated range of sizes that will fill the needs of this company.

If there are no objections the recommendations are accepted at the round table discussion and the items are accepted as standard. Objections which develop are decided between the dissenter and the group making the original recommendations.

Each accepted standard is entered on a form provided for that purpose and all members sign

their approval. This has the psychological effect of preventing carelessness in accepting a recommendation. These signed sheets are the authority of the standards group for including the items in the *Standards Catalog*.

Experience has taught that greater progress is made by assigning specific items to individuals for study and then permitting an open forum discussion by all members. This system tends to get accurate results much more speedily.

Indirect method—Some classes of material do not lend themselves readily to the approach of studying individual items. Their use is so cross connected and interchangeable that the group must be studied as a unit. The possibilities of interchanging and substitution of items in classes of this type of material present many opportunities for elimination. Examples are the paint and lumber classes.

Subcommittees dealing with these types of materials are compelled to abandon the single item policy. A workable plan is that which might be termed the indirect method of approach. All possible uses within the company for the material being considered are first determined. This involves a great deal of field work on the part of subcommittee members. Requisitioners, as shown on the list presented by the Standards Group, are interviewed. A list is compiled showing the services for which they require the material and their preference of material for each service. Each subcommittee member is assigned to this task, usually within his own department. The various lists are then consolidated. The composite listing will show each service with all of the varieties of material desired for that service by the different using groups. It is uncommon for any degree of uniformity of preference to be disclosed by this combined listing. With paint, for instance, it might very well develop that, left to their own initiative, requisitioners would select many different kinds of paint for identically the same type of service. None of these selections would necessarily be the best paint available for the service intended, all factors being considered.

The subcommittee then attempts to select the best item for each service. After this selection, the list is again reviewed with the idea of combining services; that is, so choosing an item that it will meet the requirements of more than one purpose. It might be very possible, for example, to select one paint which would suffice for both cold water pipe lines and machinery. An effort is then made to effect an agreement between the various users on the selected item. This does not as a rule develop into a difficult task as individuals are generally eager to cooperate once the advantages are explained to them.

When finally agreed upon this listing becomes

the approved recommendation to the Main Committee of accepted standards.

Special investigation of items—In some cases it becomes necessary to investigate an item more thoroughly than a visual examination to get information concerning some of the desirable features of construction. Items of proved worth are cut in sections so that the desired characteristics may be seen in detail and a description of them incorporated in the specification for that item. In like manner undesirable features are examined in detail so that exclusion might be positively provided in the description of the accepted item. Members procure the samples and have them cut as desired at the shops. The pieces are presented for study at the next subcommittee meeting. The method by which bristles are secured in paint brushes was studied in this manner.

There are also cases where it appears advantageous to examine an item more thoroughly than is possible with the ready facilities which the subcommittee has available. In these instances the item is turned over to the research laboratories for investigation to determine the characteristics regarding which the subcommittee has desired information. The chemical analysis of a cleaning compound illustrates the type of information readily obtained in this manner.

Investigations are occasionally conducted in the field by subcommittee members. There may be several items available for a service and, although the men have used all of them, no one has a clear conception of which is best. If feasible, some of the members perform field tests thorough enough in nature to establish the relative merits of the items. An example of this procedure was the field testing of bolt anchors.

The final report—The task of writing the final report of approved standards is usually assigned by the subcommittee chairman to the standards engineer working with that group. The final report itself is merely an alphabetical compilation by subclasses of the items selected as standard.

When the subcommittee has completed its job of standardizing, the list of accepted items is arranged and typed in its entirety and becomes the report of approved standards. It is then given a cursory final check by the members with a view to correcting any glaring errors that might have crept in. If none are found, the report is sent through to the Main Committee as the list of recommended standards.

Review of standards—At periodic intervals after submitting the original reports of approved standards each subcommittee meets to review the list. The adequacy and appropriateness of the approved items is considered. The report is ex-

amined with a view to ascertaining those items which are becoming obsolete. Also, new materials are investigated with a view to adopting them as standard if warranted.

These studies are facilitated by the lists prepared by the standards engineer from the Master Standards Catalog File. The list contains a record of all non-standard items purchased. Also, they present a record of the use of the existing standard items.

How the Standards Group functions

Explanation of Standards Group organization—

The Standards Catalog Group was originally organized for the purpose of publishing the standardization reports submitted to them by the various subcommittees. This also involved the preparation of the proper illustrations. In actual practice, however, it was found that subcommittees did not necessarily submit complete or accurate reports. There was a tendency toward too much haste and too little investigation. The subcommittees, composed as they are of men more or less busily engaged otherwise, did not have sufficient time to properly study the materials they were standardizing. Errors of omission and commission were frequent in their reports. The detailed study required to get all of the facts so that the most satisfactory decision could be arrived at was often omitted.

Standards Group engineers—For this reason some engineers were added to the staff of the Publishing Group. Functionally, these engineers were to serve the purpose of assisting the subcommittees and supplying them with whatever information they required. They are prepared to help the subcommittees with the broad subjects of general procedure and scope of their work. It is the work of the subcommittee members to make the decisions relative to all materials. The engineer merely supplies the information upon which these decisions hinge. His is the task of seeing that sufficient information is supplied so that the decisions of the members is an intelligent one based upon all of the facts.

The policy has been followed of assigning one engineer from the Standards Group to work with each subcommittee and to hold him responsible with the chairman for the progress of that body. He is instructed to work with that group exclusively until its task is completed.

The reports used as a basis for standardization study are prepared by the engineers from the data contained in the Master Standards Catalog File.

The standards engineers are in a strategic position to correlate the work of all subcommittees so that a coordinated whole will result from

a combination of the reports from the various groups.

The standards engineers have followed the policy of being on the alert to catch faulty or uselessly expensive practices which oftentimes subcommittee members overlook through familiarity with the practice. They help initiate economies rather than merely follow along and prepare the material for publishing.

As an example of this type of work, the engineer working with the piping group pointed out the advisability of discontinuing the practice of buying pipe over 4 in. in diameter with couplings in that the company does not use them. A thread protector was substituted for the coupling and a real saving resulted.

The preparation of the final report from the subcommittees is usually assigned to the standards engineers. In any event they always check the final report of the subcommittees for proper cross references and discrepancies. These latter include non-conformity with national standards, insufficient descriptions, and lack of coordination with previously established company standards. After the subcommittee reports are approved by the Main Committee the engineers in the Standards Group work with the assistant editor in arranging the material for publishing.

Initial list of materials furnished subcommittee—

The standards engineers furnish to the subcommittees at the beginning of their work complete lists of all materials used by the company that fall into the class under consideration. These lists are drawn from the Master Standards Catalog File and cover the purchases for a specified period, usually one or two years. In the preparation of the list the Stores Department files are also available.

As complete information as is available is supplied to the subcommittee in the initial report. Where applicable, the following information is included:

1. Name of item
2. Sizes
3. Purchase order number
4. Date of purchase order
5. Vendor
6. Trade name of item
7. Edison number and vendor's catalog number
8. Purchasing units
9. Number of units purchased
10. Price
11. Trade and cash discounts
12. Delivery point
13. Requisitioner
14. User

Experience has taught that clues to the use and identity of an item are often obtained by the subcommittee members from the knowledge of

who the requisitioner was or where the material was used. It invariably saves time to include all information in the original report, for sooner or later some one will require the information and the necessary delay which follows is annoying.

Care is exercised in the preparation of this report to see that the items are thoroughly and accurately described. The engineer familiarizes himself with the materials in the class prior to presenting the list to the subcommittee. Too much emphasis cannot be laid on this preliminary study and arrangement, as much confusion is eliminated by presenting the list of items correctly described. The engineer is prepared to find out, if he does not already know, any information required by the members concerning the items in the list.

Study of existing national standards—Part of the job of the Standards Group is to keep the various subcommittees advised concerning national standards. In his study of all types of material the standards engineer familiarizes himself with existing standards, trade practices, and the better known specifications. He is prepared to advise the subcommittee on these subjects at all times.

Copies of the latest approved national standards are obtained from the American Standards Association and presented to the subcommittee members for study and assimilation. Other pertinent data concerning the material under consideration by each subcommittee are borrowed from the Association for the information and guidance of the members.

A thorough check is given the materials finally decided upon as standard in order to make sure that they adhere to national standards or that an item, if special, is absolutely necessary.

Checking subcommittees' final reports—As pointed out previously, the chairman of each subcommittee usually assigns the task of compiling the final report of approved standards to the representative of the Standards Group working with that group.

This listing is compiled progressively as the subcommittee advances through the initial list of items with which they are working. After each meeting the engineer adds to the list the items approved during that session. He is responsible for the inclusion of the proper cross references of border-line items. He also assures himself that items approved are not at variance with those accepted by other subcommittees, if an interrelation exists between the items. The details of each description are given a final check for omissions of needed information or for the inclusion of superfluous data. Any apparent discrepancies are referred back to the members for their action.

Publishing of the Standards Catalog—The work of publishing the *Standards Catalog* is carried on in the Standards Group. The customary details which attach to all printing jobs of this kind are carried on by the assistant editor with the help of the standards engineers. Drawings are prepared by a commercial artist. These are selected by the subcommittees. An innovation has been used in preparing the copy for the printers. The paper and typewriter type are of such a size that when one sheet of copy is set in the type chosen for this job an exact page of the catalog is the result. All of the initial arrangement of copy as well as all of the proof-reading are done by the people in the Standards Group.

Distribution of Standards Catalog—The Standards Group is also charged with the distribution of the *Standards Catalog*. It is their duty to see that each individual in the organization receives as much of the catalog as he has use for. The several departments of the company are asked to submit the names of the individuals in their groups who should receive the published standards. A list of the requisitioners is also checked through to make sure that all are properly provided for. The Stores Department furnishes a list of the warehouse men having need for that section of the *Standards Catalog*.

A card record file, arranged alphabetically by names of the holders of the catalogs, gives the information as to what classes each individual holds. To facilitate circularizing users with revised classes, a cross file is made by class numbers showing the list of individuals who have that class of material.

In order to see that the books are properly kept up-to-date, a periodic check is made by a member of the Standards Group of all catalogs issued within this company.

Assist in revision of standards—It is the duty of this group to present information to the subcommittees, and at their regular meetings to consider revisions, concerning the use and purchase of non-standard items. Prior to the meetings, which are called for a complete re-study of a class of material, a thorough check of that section of the Master Standards Catalog File is made. Items which have been listed as standard and are not still being used are discovered and referred to the committee for obsolescence. During the perusal of the Master Standards Catalog File a record is also made of the non-standard items purchased during the past year together with quantities and users. This combined information concerning obsolete and non-standard items serves the subcommittee as ammunition in the reconsideration of the items to determine whether they shall be included in the up-to-date, revised list of approved standards.

7

Standards Catalog

A description of the printed record of the items adopted as standard is presented in this chapter. The *Standards Catalog* is distributed throughout the company for the use of requisitioners and users of materials. What the purpose of this catalog is, how its present form was arrived at, what information it contains, the use that is made of it, and similar information concerning this record is presented in the following paragraphs.

Purpose

Broadly, it might be said that the primary purpose of the *Standards Catalog* is to facilitate the correct ordering of approved materials. The *Standards Catalog* is the medium through which field men, requisitioners, designers, shop men, clerks, and all others are kept informed of the approved standard materials adopted for use within the company. The book serves both as a guide in the selection of materials and as an authority on the approved nomenclature of the standard items. Instructions are included setting forth what points should be covered in the writing of bills of material, requisitions, and purchase orders.

As a secondary purpose the catalog serves as a source of unbiased information concerning the materials it contains. Unusual information gained in the course of studying a class of material which may prove beneficial to users is included in the catalog under the caption of "Useful Information." Apparently the inclusion of this data is finding justification in the requests from engineering groups for that part of the catalog alone.

What the book contains

Besides the "useful information" and "instructions for ordering" mentioned in the preceding paragraph, the *Standards Catalog* contains a complete listing of the items approved as standard by each subcommittee. Illustrations are included for the sake of clarity. Appropriate indexes are also included.

General characteristics

As soon as it was finally decided to publish the book of standards, the problem of deciding upon its general characteristics was presented. The solving of this problem was assigned to the publishing group.

Decisions to be made—During the course of study to determine in what form the final catalog should be presented, the Publishing Subcom-

mittee was called upon to make decisions concerning a host of diverse questions. Some of these were as follows:

1. Size of sheet
2. Kind of paper stock
3. Binding—How the finished catalog was to be bound
4. Binders—If loose leaf, what type of binder or binders
5. Reproduction—What method of reproduction was to be used
6. Type—If printing was chosen as the method of reproduction, what kinds and sizes of type face should be used
7. Type setting—Monotype or linotype
8. Page numbers—If printed in sections, how should the pages be numbered
9. Index—Would the index cover all items published in the completed catalog or would individual class indexes be used including the items in each printed section only
10. Illustrations—Would they be used, and if so would they be line drawings or half-tones
11. Contents—What information should be included in the catalog; such as:
 - (a). Specifications
 - (b). Handbook information
 - (c). Other technical information
 - (d). Cataloging of standard items
12. Arrangement—General arrangement within a class and within the entire book
13. Stock numbers—How were items carried in stock to be distinguished from non-stock materials

The decisions finally made concerning the above questions and the reasons for making them are taken up in the following paragraphs.

Size of sheet—The 8½ in. by 11 in. size of page was chosen for the *Standards Catalog* because it is one of the most common standard sizes in the printing trade. Being letter size, it fits into the most common size of filing cabinet. The subcommittee was also aware of the experience of a well-known corporation with their standards book. It was originally printed on a small-size sheet and was later, at great expense, reprinted on the 8½ in. × 11 in. size sheet.

Moreover, for equivalent page area much more information can be put on the standard letter-sized page than on the smaller one because of less marginal space loss. It is to be noted that the trend over the past several years has been toward this size of book rather than the smaller one. Many manufacturers have recently adopted the letter size as standard for their trade literature.

Kind of paper stock—In determining the type of paper stock to be used, consideration was given to transparency and wearing qualities of the paper. While a bond paper is much thinner than a clay-washed paper it has the disadvantage of being so translucent as to become very annoying. With some bond papers one not only sees the page he is trying to read but also the printing on the back of that sheet, and at times the printing on the face of the following sheet. This is impossible with a clay-washed paper because it is so opaque. However, by using bond paper the finished catalog would be considerably thinner.

Certain types of paper tear easily, and some quite readily become stained. There are also those types of paper which have the disagreeable characteristic of becoming dog-eared with little usage. Weighing all of the various known factors, the Publishing Subcommittee finally decided upon 80-pound enamel paper as the kind to be used for the *Standards Catalog*.

Binding—Broadly, the choice of binding lay between a loose-leaf arrangement or a bound volume. In that it was recognized that the *Standards Catalog* would be undergoing constant revision, it was thought advisable from an economic standpoint alone to choose the loose-leaf form of assembly. With a loose-leaf volume there is the constant bother of keeping it up-to-date. Also, when kept up by the individual holder there is always the possibility of misplaced sheets. A system of periodic check-ups minimizes these difficulties, however.

Binders—Having decided upon the loose-leaf method of presentation, the subcommittee was immediately confronted with the problem of what type of binder, or binders, to use. It was recognized that the task of standardizing and publishing various classes of material would extend over a considerable period. It was also known that many individuals would receive only a few of the total number of classes of material. For this reason it was originally decided to adopt three types of post binders. The ring binder was discarded from consideration because in actual practice it had been found that sheets tear out of them readily. The small-sized binder was designed to hold up to 100 sheets. The medium-sized binder was believed to be of sufficient size to hold all of the sheets published through perhaps 80 or 90 per cent of standardization. The subcommittee tentatively adopted a strap binder for the larger size and it was presumed that this would hold all sheets published. It is to be borne in mind that only a rough estimate of the total number of pages that would finally be included in the catalog was known at that time.

The small-sized binder was partially designed

by the publishing group. The design eliminated the known disadvantages of existing binders that were on the market. It is of interest to note that several manufacturers have since adopted this style as one of their regular lines. When open, the covers of this binder lie flat on the table. Also, there are no exposed screw heads to scratch the surfaces of furniture.

The middle-sized binder was chosen for much the same reasons. In both cases the ease of putting in new sheets, and the firmness with which they were held in place, were given consideration. The ruggedness of the product was a factor in the selection. Many types of binders were scrutinized as to construction and observed in actual service before the committee finally decided upon the particular types which they adopted. The same procedure was followed in the selection of the large-sized binder and the choice was made after considering several available types.

It was necessary for the subcommittee to select the types of binders at the beginning so that all sheets being published would be so punched that they would fit all three binders.

Reproduction—There were several methods of reproduction considered for the publishing of the *Standards Catalog*. Some of these were:

1. Mimeograph
2. Multigraph
3. Hectograph
4. Photolithography
5. Printing

The last of these methods was selected on the basis of its appearance, because it offered the greatest possibilities for arrangement, and because revisions could be made easily. It was believed that printing would afford the most latitude for the presentation of the varied subject matter to be included in the catalog.

Some of the methods investigated precluded the inclusion of illustrations. Others presented a rather untidy appearance. Again, there were those processes which permitted using only one side of a sheet. The investigation of the various methods included a study of the original cost and the cost of revisions for each type of reproduction.

Considerable thought was being given at that time to "selling" standardization to the company as a whole. It was believed that a neat-appearing printed book would have the psychological effect of inspiring a greater confidence in the accuracy of the contents. Certainly, any feature that gave promise of fostering confidence and building up the prestige of the publication would receive earnest consideration at that time.

Recently the Publishing Subcommittee undertook the study of new methods of reproduction which have been developed since the original

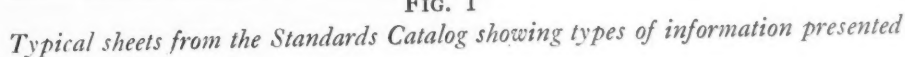


FIG. 1

standardized and published. A numerical index is also included for the convenience of users. To make the index of maximum utility an effort is made to list each item under the several names by which it may be known.

Illustrations—The consensus of opinion was that the utility of the *Standards Catalog* would be increased by the inclusion of illustrations. There are many arguments pro and con that can be advanced on this subject both from an economic and a utilitarian point of view. However, this subcommittee agreed in the affirmative and illustrations are being used.

It is interesting to note that one of the functions of the *Standards Catalog* is to properly describe items. Its purpose might be compared to that of a dictionary. Practically every dictionary compiler finds it advisable to include pictures of the items he is trying to describe.

Wherever practicable line drawings are included. If it appears advantageous to include an illustration, and a line drawing will not suffice, a photograph is resorted to. Because of the added cost this latter method is used as little as possible.

Information to be included—The subcommittee recommended that, in addition to the cataloging, the volume should contain the pertinent technical information pertaining to the material that was assembled in the course of studying and investigating the items in each class. Such of this information as would obviously assist a user in gaining a better understanding of the materials listed in the cataloging was published. Many vague points and misconceptions have been cleared up in this manner. For instance, in the tool class a résumé was included straightening out the tangled nomenclature applied to files. Experienced shop men have frequently in the past included on a requisition for this item an impossible description which, when interpreted, would designate a file whose cross section would be of several different shapes. The inclusion of special tables of handbook information which are of value to individuals in this company was also favored. Common tables found in most engineering handbooks are not included. At the present time the purchasing specifications are not included. They may be incorporated at a later date.

General arrangement—The general arrangement of the data to be printed was also studied by the Publishing Subcommittee. It was decided to present the technical information first, the cataloging was to follow, and lastly the handbook data was to be included. This arrangement is followed within each class. Illustrations appear opposite the catalog descriptions where feasible. A two-column page was selected as offering the greatest possibilities for arrange-

ment. This is dispensed with where a series of items is being presented for which the description incorporates only variations of identically the same type of information. A listing of carbon brushes is a good example of this.

Designation of stock items—The distinguishing of stock items from non-stock materials in the *Standards Catalog* appeared to be a very desirable arrangement. This would facilitate the elimination of a separate book for the Stock Catalog. The combining of the two volumes would curtail a certain amount of expense by minimizing duplication of effort. A requisitioner would also be assured of prompt delivery if he were aware of the fact that the desired item was carried as stock. In some instances the availability of the item might influence the selection of a stock item.

For these reasons it was decided to make the listing of the materials carried in stock readily distinguishable from standard non-stock items. The method adopted to accomplish this was to print the Edison Number of an item in bold-face type and further attract attention to the item by following the number with an asterisk.

8

Master Standards Catalog File

This chapter gives a description of the system used to maintain an up-to-date history of the purchases of all materials used by the company.

Purpose

The Master Standards Catalog File is an active index card file maintained in the Purchasing Department. It serves the dual purpose of providing data for the studies of materials and supplies conducted by standardization subcommittees and furnishing valuable information for the investigations conducted by buyers relative to costs and quantities. Information is also obtained here by individuals in the design groups and estimating departments to assist them in determining the probable cost of new construction enterprises.

Information contained in the file

The file contains a complete record of all of the information written on purchase orders issued for the procurement of equipment, materials, and supplies. From each purchase order a record is taken of the following information:

- (1). Date of purchase order
- (2). Purchase order number
- (3). Vendor's name
- (4). A complete description or specifica-

tion of the material or equipment, including:

- (a). Accurate nomenclature
- (b). Detroit Edison Company specification number
- (c). Detroit Edison Company item (Standards) number
- (d). Vendor's catalog number
- (e). Sizes
- (5). Quantity purchased
- (6). Price and unit
- (7). Cash and trade discounts
- (8). Delivery point
- (9). F.O.B. point

Arrangement of the file

The Master Standards Catalog File is a 5 in. X 8 in. visible card index file. The classification

word and determines the position of the card in the alphabetical arrangement within a subclass.

The present operating plan provides a card for each specific type of item, but groups together as many as four sizes of the same item on one card. The advisability of grouping even to such a limited extent has not as yet been established, but a more extended policy of bunching together of different items has definitely been proved impracticable. The ideal arrangement appears to be a separate card for each and every individual item. The file may eventually be put in that form after the standardization now in progress is completed with its subsequent reduction of sizes and types of items.

The items in the standardized classes for which cards are entered in the file are only those which have been accepted as standard. The non-

70-5 Fuse Parts			
FUSE, 25,000 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
FUSE, 25,000 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
FUSE, 25,000 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
70-4 24000 Volt			
FUSE, 7500 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
FUSE, 7500 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
FUSE, 7500 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
FUSE, 7500 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
FUSE, 7500 V.	CARTRIDGE, FERRULE	ARC-QUENCHING	100
FUSE, 5500 V.	CARTRIDGE, FERRULE	U.S. SPEC. 100	100
FUSE, 5500 V.	CARTRIDGE, FERRULE	U.S. SPEC. 100	100
FUSE, 5500 V.	CARTRIDGE, FERRULE	U.S. SPEC. 100	100
FUSE, 5500 V.	CARTRIDGE, FERRULE	U.S. SPEC. 100	100
70-3 4800 Volt			
FUSE, 600 V.	CARTRIDGE, KNIFE-BLADE	RENEWABLE	100
FUSE, 600 V.	CARTRIDGE, KNIFE-BLADE	NON-RENEWABLE	100
FUSE, 600 V.	CARTRIDGE, FERRULE	RENEWABLE	100
FUSE, 600 V.	CARTRIDGE, FERRULE	NON-RENEWABLE	100
70-2 600 Volt			
FUSE, 250 V.	CARTRIDGE	NON-RENEWABLE	100
FUSE, 250 V.	CARTRIDGE, KNIFE-BLADE	RENEWABLE	100
FUSE, 250 V.	CARTRIDGE, KNIFE-BLADE	RENEWABLE	100
FUSE, 250 V.	CARTRIDGE, KNIFE-BLADE	NON-RENEWABLE	100
FUSE, 250 V.	CARTRIDGE, KNIFE-BLADE	NON-RENEWABLE	100
FUSE, 250 V.	CARTRIDGE, KNIFE-BLADE	NON-RENEWABLE	100

FIG. 3

Section of visible index of Master Standards Catalog File

of materials is followed in the arrangement of the cards in the file. Within each subclass the item names are arranged alphabetically.

The title on each card incorporates the noun and the descriptive adjectives of which the name of an item is composed. The noun is the key

standard items which have been purchased are posted on a card especially provided for that purpose. Later, if the item is accepted as a standard by the subcommittee authorized to accept it, a card is entered in the file and the record transferred.

Operation

The operation of this filing system consists of two distinct parts. The first is the task of properly posting the information in the file in the correct place. The second problem involves the taking of information from the file in complete and usable form.

Entering information in the file—This history of purchases is enlarged each day by the addition of the information contained on all orders checked and approved the previous day. The orders are sorted according to the classification and the data posted on the proper card in the correct subclass. Great care should be exercised to make sure that the entry is being made in the correct place, as only by so doing can a complete and accurate record be obtained of each item.

The success of the entire system hinges on this proper placement of the information taken from the purchase orders. In turn, the degree of accuracy with which the clerks locate the correct card varies directly with the care used in devising card titles to provide for the items. Each error is, of course, two-fold in that the record on the card where the information is posted also becomes distorted.

In addition to posting information from each purchase order, there is also the responsibility of maintaining the cards in each section of the file in strict agreement with the *Standards Catalog*. This necessitates making proper provision for non-standard items purchased so that a record of them can speedily be drawn from the files at periodic intervals for presentation to the proper subcommittee.

Getting information from the file—From the Master Standards Catalog File can be drawn a complete record of the quantities of any class of materials purchased during a specified period. In that all materials used by the company are procured by the Purchasing Department, these files give an accurate picture of the requirements for all items.

During the course of carrying out the regular routine purchasing function of buying, individuals in the Order Group keep constantly in touch with this file. Many requests for current prices are received from the buyers. There are also many requests for a complete record of the data for one year pertaining to items in an entire class of material. These reports are studied by the buyers and subcommittees alike.

The foundations of the work of standardization are laid on reports from this file. The records serve as a datum plane from which work is begun. From no other source could a subcommittee obtain a complete list of the materials comprising any one class. Of special interest to members are the data concerning the quanti-

ties of any non-standard items being purchased. These reports are compiled prior to the regular meetings to review the existing standards in any class of material. This information provides a clue to the necessity for a new standard. It also indicates the growing obsolescence of once active standard items.

The cards in the file provide an easy means of rapidly compiling these reports. Contingent upon a carefully evolved plan of providing for each item, the report is complete and accurate.

Relation to Standards Catalog—There is a close relationship existing between the Master Standards Catalog File and the *Standards Catalog*. Either would be impossible without the other. The volume could not be kept up-to-date efficiently without the information collected in the files. In turn, the latter could not be operated effectively without the assistance of the standardized nomenclature.

The Master Standards Catalog File is the active, dynamic record of the items included in the catalog.

Underwriters' Laboratories Standards for Wiring Devices

Two recent publications by Underwriters' Laboratories include standards in mimeographed form covering Edison Base Lamp Holders and Attachment Plugs and Receptacles. Both of these standards are first editions; and in this connection it is interesting to note that formal standards are now available for the first time for these long established classifications, although requirements in other forms have existed for a long time. In the case of lamp holders in particular, which have been known for many years as sockets and receptacles, the devices are some of the very oldest which are known to the electrical industry—dating back to Edison's introduction of the incandescent electric lamp. Attachment plugs and receptacles, commonly known also as caps and convenience outlets, are of much more recent development, although they have been recognized by the National Electrical Code and by the Laboratories for many years.

The standard for Edison base lamp holders has been built up around the modern product, although it contains many items relating to long established practice in the manufacture of these devices. The earlier requirements for the construction and test of lamp holders were included in the National Electrical Code, but these were discontinued in detail after the edition of 1915. The present standard is based to a large extent upon the requirements of the National Electrical

Code, but has been amplified and extended to include features of current production.

The standard includes sections on definitions, materials, enclosures, linings, interiors, assembly, special features, rating, performance, and marking. Among the newer features are test requirements for lamp holder linings and pull and torsion tests for screw shells.

The standard for attachment plugs and receptacles follows the general form and arrangement of the lamp holder standard and includes sections on definitions, general requirements, attachment plugs, cord connectors, receptacles, current taps, overload tests, rating and marking. Among the newer features are definite requirements for the identification of terminals in the case of polarized devices, and requirements for moulded rubber attachment plugs.

Each of these standards contains a brief section describing the Laboratories' Re-examination Service under which devices in both classifications are listed.

The price of the lamp holder standard is 40 cents per copy and that of the standard for attachment plugs and receptacles is 25 cents. Copies may be obtained from the Laboratories' offices at New York, Chicago, and San Francisco.

Industry Provides for Use of Electrical Code

A resolution providing for the use of the National Electrical Code (C1-1931) was adopted recently at a trade practice conference of the electrical contracting industry held under the auspices of the Federal Trade Commission. The resolution, which was accepted by the Commission as an expression of the trade, and which was listed as Rule A, Group II, reads as follows:

"In electrical installations in territories where no governmental laws, rules, or regulations prevail the National Electrical Code, approved by the American Standards Association, provides the proper regulations."

At the conference, 23 resolutions dealing with various trade and business practices were adopted. The Federal Trade Commission, after consideration, has reworded some of these resolutions and has divided them into Group I and Group II. Those in Group I the Commission has approved, and those in Group II have been accepted by the Commission as expressions of the trade.

The Federal Trade Commission, in its statement concerning the conference, estimates that

approximately 50 per cent of the industry, conducting 65 per cent of the volume of business, was present or represented.

A copy of the statement by the Commission is available for loan through the ASA office.

ASA BULLETIN Volume Numbers

Up to and including December, 1931, the issues of the ASA BULLETIN were numbered consecutively from 1 to 68, inclusive. Beginning with the January, 1932, issue, volume numbers will be used, the volumes to coincide with the calendar year, and the pages of each volume to be numbered consecutively, from January through December.

For the convenience of those who maintain back files of the ASA BULLETIN, the following volume designations apply to the issues prior to January, 1932:

Volume A—Mimeographed bulletins (1-49) issued to ASA Sustaining-Members at intervals during the years 1923 to 1929, inclusive.

Volume I—Issues 50-56 (June-December, 1930)

Volume II—Issues 57-68 (January-December, 1931)

An index to Volume I was included with ASA BULLETIN No. 60 (April, 1931).

Committee on Procedure and Administrative Problems Appointed

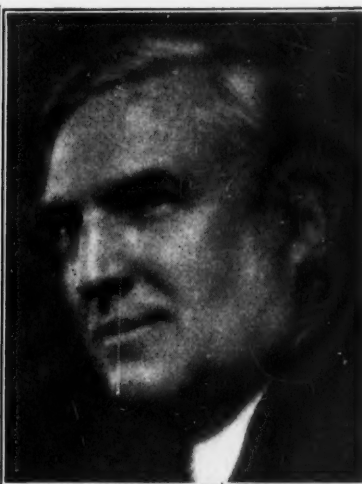
The following members of the ASA Committee on Procedure and Administrative Problems have been appointed by the chairman of the Standards Council to serve for the year 1932: Admiral G. H. Rock, assistant chief, Bureau of Construction and Repair, U. S. Navy Department, Washington, D. C., *chairman*; F. M. Farmer, vice-president, Electrical Testing Laboratories, New York; Alexander Maxwell, National Electric Light Association, New York; S. L. Nicholson, Westinghouse Electric and Manufacturing Company, New York; A. W. Whitney, National Bureau of Casualty and Surety Underwriters, New York.

Standards for Flanges Published

The American Standard for Cast-Iron Pipe Flanges and Flanged Fittings for maximum non-shock working hydraulic pressure of 800 lb per sq in. (gage) at ordinary air temperatures (B16B1-1931) has been published and can be purchased at 35 cents per copy from ASA.



W. T. Rossell

Pirie-MacDonald, New York
S. F. VoorheesUnderwood & Underwood, Washington, D. C.
A. R. McGonegal

New Members of ASA Board of Directors

Four of the six new members of the ASA Board of Directors, authorized in the amendment to the ASA Constitution adopted on July 10, 1931, to increase the number of members of the Board from 9 to 15, have now been appointed. The nominations for the new members were made by the Member-Bodies selected for that purpose at the meeting of the Board of Directors in January. The new members are:

A. R. Small, Underwriters' Laboratories, New York, representing the Fire Protection Group

Stephen Voorhees, New York, representing the American Institute of Architects

W. T. Rossell, Brooklyn and Queens Transit Corporation, Brooklyn, representing the American Electric Railway Association

Leonard Peckitt, Warren Foundry and Pipe Company, New York, representing the Cast Iron Pipe Research Association.

A.S.S.E. Representative on Standards Council

A. R. McGonegal, chief plumbing inspector for the District of Columbia, and secretary of the American Society of Sanitary Engineering, has been appointed as the representative of the American Society of Sanitary Engineering on the ASA Standards Council. Announcement of the affiliation of the A.S.S.E. as a Member-Body

of the American Standards Association was published in the February issue of the ASA BULLETIN.

Mr. McGonegal is chairman of subcommittee 5 on Traps of the Sectional Committee on Standardization of Plumbing Equipment (A40), and is also a member of the Sectional Committee on Screw Threads for Hose Couplings (Other than Fire Hose Couplings) (B33).

He is a member of the American Public Health Association, the American Association for the Advancement of Science, the Society of American Military Engineers, and the Royal Sanitary Institute of Great Britain. He is also a member of several committees under the procedure of the National Bureau of Standards and of the Federal Specifications Board.

A.S.T.M. Publishes Symposium on Malleable Iron Castings

As part of the annual meeting of the American Society for Testing Materials in Chicago in June, 1931, a joint Symposium on Malleable Iron Castings was held under the sponsorship of the American Foundrymen's Association and the American Society for Testing Materials. Papers there given covering the machinability and corrosion of malleable iron are included in a volume of 122 pages recently issued by the A.S.T.M. and A.F.A. A discussion of the manufacture of malleable iron is presented and current specifications of malleable iron castings are summarized.

Copies of this publication are available for loan from the American Standards Association, or they may be purchased from ASA or from either of the cooperating sponsors, the A.F.A. and the A.S.T.M. at 75 cents each.

Mining Committee Holds Annual Meeting

The latest meeting of the Mining Standardization Correlating Committee was held on February 17, 1932, in connection with the annual winter meeting of the American Institute of Mining and Metallurgical Engineers. The following were elected as officers for 1932:

E. A. Holbrook, University of Pittsburgh, *chairman*

Warren R. Roberts, Roberts & Schaefer Co., Chicago, *vice-chairman*

Lucien Eaton, New York, *vice-chairman*

To serve with the officers as an Executive Committee, three other members of the MSCC were selected as follows:

Rush N. Hosler, Harrisburg, Pa.

W. E. Goodman, Goodman Manufacturing Company, Chicago

W. Val De Camp, United Verde Copper Company, Jerome, Arizona

Changes in personnel that have taken place since the meeting of February, 1931, are as follows:

American Institute of Electrical Engineers—D. E. Renshaw (*vice* Carl Lee), Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

W. H. Lesser, *alternate* (*vice* Graham Bright), Scranton, Pa. (Chairman, Anthracite-Lehigh Valley Section, A.S.M.E.)

American Institute of Mining & Metallurgical Engineers—John T. Fuller (*vice* J. D. Conover), Republic Mining and Manufacturing Company, New York

T. T. Read, *alternate*, School of Mines, Columbia University, New York

Mine Inspectors Institute of America—C. A. McDowell, *alternate*, Pittsburgh Coal Company, Pittsburgh

National Bureau of Casualty & Surety Underwriters—W. M. Graff, *alternate*, director, Safety Engineering Division, National Bureau of Casualty & Surety Underwriters, New York

U. S. Bureau of Mines—J. J. Forbes, *alternate*, Bureau of Mines Experiment Station, Pittsburgh

Announcement was made that H. M. Lawrence, mining engineer added to the ASA staff in May, 1931, had been designated to act as secretary of the MSCC.

Action was taken by the committee with regard to methods for Screen Testing of Ores (M₅), for which a standard had just been submitted by the sponsor, the A.I.M.E., and it was voted to recommend the approval of this standard by the ASA Standards Council as American Recommended Practice.

The attention of the MSCC was called to a revision now under way for the Safety Code for the Construction, Care, and Use of Ladders (A14-1923). Sections of this standard were used as a basis for Construction and Maintenance of Ladders and Stairs for Mines (M12-1928). The committee therefore decided that, in the event of a revision of A14 and its approval by Standards Council, careful examination should be given to the provisions in the revised document with a view to determining whether or not a revision of the mine ladder code would be desirable. Should a revision be decided upon, the sponsor, the American Mining Congress, was authorized to reconstitute the sectional committee and prepare such revision.

Simplification Advances in Leather Trade

Active cooperation with American industry by the Commercial Standardization Group of the National Bureau of Standards is now offering the leather interests facilities for establishing standards of benefit both to producer and consumer. The Division of Simplified Practice now has recommendations in the acceptance stage reducing the number of sizes of ladies' suit-cases and wardrobe trunks and has prepared certain recommendations of interest to the leather industry although not applicable to leather itself. A simplified classification of calf leathers is under consideration. The Division of Trade Standards in cooperation with a group within the Tanners' Council of America has developed a standard (CS 34-31), effective August 1, 1931, to provide for the gaging of the thickness of bag, case, and strap leather. Designations of thickness, together with allowable tolerances, are given in terms customarily used in domestic and foreign trade. The certification plan has been applied by the Division of Specifications to the Federal Specifications for vegetable-tanned leather belting, sole leather, and upholstery leather, respectively, and to lace leather. The extension of the certification plan to the specifications for bag, hydraulic packing, and rigging leather, respectively, is now under consideration.

With the above program of the Commercial Standardization Group, the leather section of the organic and fibrous materials division is actively cooperating through the development of

technical data on which to base standards. In cooperation with technical experts in the leather industry, studies of the properties of various leathers preceding the preparation of Federal Specifications and review of the necessary requirements to be met by leathers have been a function of this section. A further activity of this section is participation in the work of the Sectional Committee on Specifications for Leather Belting (B42) of the American Standards Association under the sponsorship of the American Society of Mechanical Engineers for the development of a national standard for vegetable-tanned leather belting. The sectional committee has delegated the drafting of the proposed American Standard to a subcommittee, for which a member of the leather section is serving as chairman.

British Standardizing Body Enlarges Scope

A Royal Charter which legalizes the reorganization of the British Engineering Standards Association and changes the name of the Association to the British Standards Institution has just been granted. During recent years the British Engineering Standards Association has prepared British Standard Specifications and established British Standards not only for use in the engineering field, but also for a growing range of materials in the building, chemical, and textile industries.

The need for regularizing this extension of the original functions of the Association became imperative when the chemical industry, as the result of a representative conference convened by the Association of British Chemical Manufacturers, invited the Association to widen its scope to include chemical standardization generally.

The building industry also desired a substantial extension of the work of standardization within that industry, and urged that the title of the Association should be more in conformity with the wideness of its scope.

At the Imperial Conference held in October, 1930, the desire was expressed that there should be a single centralized national standardizing body in each of the countries forming the British Empire.

It was, therefore, decided to reorganize the work of the Association into four main divisions of equal standing, responsible for the preparation of British Standard Specifications in the engineering, chemical, building, and textile industries, each of the divisions being under the control of a representative Divisional Council.

The activities of the Institution will be under

the control of a General Council which will have under it the four Divisional Councils. The work of the Engineering Division will be delegated to Industry Committees dealing with the main branches of the engineering industry, such as civil engineering, mechanical engineering, electrical engineering, etc., and will for a time represent the larger portion of the Institution's activities.

There are now 600 committees working under the procedure of the British Standards Institution and over 400 published British Standard Specifications.

British Standards Institution Adopts Trade Mark

A trade mark consisting of the words "British Standard" to be used in connection with certain classes of products which will be manufactured in accordance with national standards was registered recently by the British Standards Institution. The classes of products with which it is expected the trade mark will be used include: paints, varnishes, etc.; road-making materials; electricity-measuring instruments; electric switches, etc.; porcelain and earthenware goods for electrical purposes; mineral substances for road-making, Portland cement; "contrivances" for electrical purposes; India rubber, insulators; electric insulating materials, poles, ropes, etc.

German Standard Sizes for Paper Widely Adopted

A standard system of paper sizes, originally developed in Germany, has been adopted as a national standard not only in that country but also in 12 others, as follows: Austria, Belgium, Czechoslovakia, Finland, Holland, Hungary, Japan, Norway, Poland, Roumania, Russia, and Switzerland.

It is now reported that the paper manufacturers in Norway have made an agreement to sell standard size letterheads and writing paper, including paper for legal documents, typewriter and copying paper, at a three per cent lower price than paper of the same quality in non-standard sizes.

In a similar way, members of the Swiss Association of Envelope Manufacturers have adopted a price reduction for the envelope in the European standard size C6 (114 × 162 millimeters, or about 4½ × 6½ in.) in order to promote its use. This size is used with letterheads of the European standard size A4 (210 × 297 millimeters or about 8¼ × 11¾ in.) most commonly used in business and private correspondence.

ASA PROJECTS

A Review of Civil Engineering Projects under ASA Procedure

The fifth of a series of reviews of standardization projects under the procedure of the American Standards Association

The status of all civil engineering projects under ASA procedure is summarized in the following review. The data presented are taken from the files of the American Standards Association and are corrected to February 1, 1932, bringing up-to-date the review of civil engineering projects published in the March, 1931, issue of the ASA BULLETIN. The personnel of the sectional committees handling the projects may be found by reference to the project section of the 1931 American Standards Association Year Book (pages 28-35).

A1a-1931—Standard Specifications for Portland Cement

A1b-1931—Standard Methods of Testing Cement

Sponsor—American Society for Testing Materials.

Chairman—W. K. Hatt, civil engineer, Purdue University, Lafayette, Ind.

Secretary—W. M. Kinney, general manager, Portland Cement Association, Chicago.

Subsequent to the original approval in 1921, Specifications for Portland Cement, which also included Methods of Testing, have been revised from time to time to keep them in accord with current developments in the industry. In the latest revision, approved by the sponsor in 1930, the standard was separated into two documents—Standard Specifications for Portland Cement (A.S.T.M. C9-30); and Standard Methods of Testing Cement (A.S.T.M. C77-30). These were approved by the American Standards Association as American Standards in June, 1931.

Consideration is now being given in the A.S.T.M. Committee C-1 on Cement to certain details which were lost sight of when the standard was separated into two documents. Continued study is also being given to the requirements of these standards, as the latter are affected by the rapidly increasing use of quick-setting and high-early-strength cements in the industry.

A2-1926—Fire Tests of Building Construction and Materials

Sponsors—American Society for Testing Materials; Fire Protection Group; U. S. Department of Commerce, Bureau of Standards.

Acting Chairman—R. P. Miller, consulting engineer, New York.

Secretary—Fitzhugh Taylor, Underwriters' Laboratories, Inc., Chicago.

Scope—Fire test methods applicable to assemblies of masonry units, composite assemblies of structural materials for buildings, including bearing and other walls and partitions, columns, girders, beams and slabs, and composite slab and beam assemblies for floors and roofs, and to other assemblies and structural units which constitute permanent integral parts of a finished building; method of classification of building members on the basis of such tests.

These specifications (A.S.T.M. C19-26T), submitted by the American Society for Testing Materials to ASA as an existing standard, were approved as an American Tentative Standard in 1919. The American Society for Testing Materials, the Bureau of Standards, and the ASA Fire Protection Group were appointed joint sponsors and organized a sectional committee to take care of future revisions of the standard. In 1926, a revision of the standard developed by the sectional committee was approved by ASA as the present American Tentative Standard (A2-1926).

With regard to possible revisions, the sectional committee in recent years has taken the attitude that a long period of trial is required to establish definitely the value of the provisions of the standard. Further, the committee has recognized that frequent revisions would be unwise because of their effect on the status of classifications derived from tests conducted in accordance with the present text. At present, consideration is being given by the sectional committee to the question of requesting the advancement of these methods for fire tests from the status of American Tentative Standard to American Standard, due to renewed interest in revised building codes in some of the larger cities, more particularly in New York.

In the A.S.T.M., Committee C-5 on Fire Tests of Materials and Construction has organized a new subcommittee to consider the formulation of standard methods for conducting fire tests on fire doors and perhaps other kinds of fire stops for protection of wall openings against the passage of fire. If developed, these additional methods of fire testing will be available to the sectional committee for possible incorporation in the present standard.

A5-1930—Method of Test for Toughness of Rock

(See project A37.)

A6-1925—Specifications for Drain Tile

Sponsors—American Society for Testing Materials; U. S. Department of Agriculture.

Chairman—Anson Marston, Dean of Division of Engineering, Iowa State College, Ames, Iowa.

Secretary—W. J. Schlick, Iowa State College, Ames, Iowa.

Scope—Specifications for drain tile made of shale, fire clays or surface clays, and of concrete.

Subsequent to the original approval of this standard (A.S.T.M. C4-24) in 1922 as American Tentative Standard, the personnel of A.S.T.M. Committee C-6 on Drain Tile was enlarged and approved as the sectional committee under ASA procedure. Early in 1925, as a result of research, revision of the standard was proposed. These changes were effected and the standard was advanced to American Standard. In 1930, consideration was given to further revisions to incorporate results of recent studies. However, as there has been no general demand for these revisions, the committee has decided to defer action. Contact is being maintained with A.S.T.M. Committee C-4 on Clay and Cement-Concrete Pipe in order that mutual decisions may be reached on questions affecting the standards under the jurisdiction of the two committees.

A13-1928—Scheme for the Identification of Piping Systems

Sponsors—American Society of Mechanical Engineers; National Safety Council.

Chairman—A. S. Hebble, superintending engineer, Southern Pacific Steamship Lines, New York.

Secretary—I. G. Hoagland, secretary, National Automobile Sprinkler Association, New York.

Scope—Identification of piping systems in industrial and power plants which are not buried in the ground; with especial reference to personal hazards in times of accident at a plant; including conduits for the

transport of gases, liquids, semi-liquids, or plastics, but not including conduits filled with solids.

The Scheme for Identification of Piping Systems, approved in 1928 by ASA as American Recommended Practice, is still in force. Since its publication, the suggestion that a detailed system of identification for power-house piping be developed has been taken under consideration by the sectional committee.

A19-1923—Method of Test for Voids in Fine Aggregate for Concrete

Sponsor—American Society for Testing Materials.

Submitted as an existing standard by the American Society for Testing Materials (A.S.T.M. C30-22), this standard was approved as an American Tentative Standard in 1923 with the A.S.T.M. as sponsor. No revisions are under consideration.

A21—Specifications for Cast-Iron Pipe and Special Castings

Sponsors—American Gas Association; American Society for Testing Materials; American Water Works Association; New England Water Works Association.

Chairman—Thomas H. Wiggin, construction engineer, Federal Water Service Corporation, New York.

Vice-Chairman—N. F. S. Russell, president, U. S. Cast Iron Pipe and Foundry Company, Burlington, N. J.

Secretary—C. C. Simpson, Jr., general superintendent of mains, Consolidated Gas Company of New York.

Scope—Unification of specifications for cast-iron pipe, including: materials; dimensions; pressure rating; methods of manufacture (including such new developments as centrifugal casting), in so far as they may be necessary to secure satisfactory specifications; elimination of unnecessary sizes and varieties; consideration of the possibility of developing a coordinated scheme of metallic pipe and fittings applicable to all common mediums; and methods of making up joints in so far as they are determining as to the dimensional design of cast-iron pipe. The types of cast-iron pipe to include: bell and spigot pipe; flanged pipe; flanged and bell mouth fittings and wall castings; pipe elbows, tees, Y's, return bends, and other fittings not now included in standard lists; cast-iron pipe threaded for flanges or couplings. The standardization is not to include: methods of installing pipe and similar matters, except as to the making up of joints with relationship to the dimensional standardization of pipe and fittings as noted above.

During 1931, strength tests on 12-inch pit cast pipe were started at the University of Illinois under the direction of Professor M. L. Enger. These tests are similar to those previously made there on 20-inch pit cast pipe.

At the same time trench load tests on 12-inch pit cast pipe were started at Iowa State College

under the direction of W. J. Schlick, similar to those previously made by him for this committee on 20-inch pipe. Some of these trench load tests are made with internal water pressure, and some without.

Some further tests on organic coatings and linings were made at the Birmingham shops of the American Cast-Iron Pipe Company under the direction of S. R. Church, chairman of Subcommittee 3-B on Organic Coatings.

The tentative specification for Cement Mortar Lining for Cast-Iron Pipe and Fittings prepared by Subcommittee 3-C, E. O. Sweet, chairman, was approved by technical committee 3 on Corrosion and Coatings and then by the sectional committee. This specification is now before the sponsor bodies for their consideration.

In 1929 the replies, about 100 in number, to the committee's general questionnaire on cast-iron pipe were included in a book distributed to the members of the committee. During 1931 some 50 more replies were received and tabulated on tracings.

The committee on fittings has considered water and gas fittings with the purpose of eliminating unnecessary duplication. It is now studying short body fittings made to body lengths identical with those in the flange standards of the Sectional Committee on Pipe Flanges and Flanged Fittings (B16), to see if the losses of head in flow of water are sufficiently low, as determined by the tests made for the committee by E. W. Schoder, professor of experimental hydraulics, Cornell University, to justify making these short fittings standard for water purposes.

A26-1930—Methods of Sampling Stone, Slag, Gravel, Sand and Stone Block for Use as Highway Materials

(See project A37.)

A27-1924—Method of Test for Apparent Specific Gravity of Coarse Aggregates

(See project A37.)

A31-1924—Specifications for Materials for Cement Grout Filler for Brick and Stone Block Pavements

Sponsor—American Society for Testing Materials.

Scope—Specifications covering materials used in the preparation of cement grout when used as a filler for brick or stone block pavements, including sand, water, and by reference, Portland cement.

This standard (A.S.T.M. D57-20) was approved in 1924 as American Tentative Standard by the American Standards Association, having

been submitted by the American Society for Testing Materials as an existing standard.

A35—Manhole Frames and Covers

Sponsors—American Society of Civil Engineers; Telephone Group.

Chairman—L. B. Fish, American Telephone and Telegraph Company, New York.

Secretary—H. C. Dean, New York & Queens Electric Light & Power Company, Long Island City, N. Y.

Scope—Standardization of design, material, and dimensions of manhole frames and covers.

A proposed American Standard covering 13 types of manhole frames and seven types of manhole covers, and hydrant and service valve boxes, was completed early in 1931. More than 6000 copies of printed proof sheets of this draft were distributed by ASA in order to give this proposal wide publicity. About 500 letters have already been received, and after the closing date set for comments and criticism (April 1, 1932), all replies will be considered by the sectional committee. For details of the proposed standard see ASA BULLETIN, January, 1932, page 44.

A36—Rating of Rivers

Sponsor—U. S. Geological Survey.

Chairman—N. C. Grover, U. S. Geological Survey, Washington, D. C.

Secretary—W. G. Hoyt, U. S. Geological Survey, Washington, D. C.

Scope—Units and bases for rating rivers for producing water power.

A comprehensive plan for the rating of power and rivers, including recommendations as to the units to be used, was completed by a representative sectional committee under the auspices of ASA in 1926. Submission for formal approval as an American Standard was, however, postponed in view of the importance of international cooperation. Numerous international interchanges have taken place, and the subject was discussed in conferences of the International Electrotechnical Commission in 1927 and again in 1930. At the conference in Stockholm in 1930, the following six definite recommendations were adopted:

1. That the kilowatt be adopted as the unit of power;
2. That either the foot or the meter be adopted as the unit of head;
3. That the full power of the water and the gross head be used in the computations, showing in kilowatts the full theoretical power at 100 per cent efficiency;

4. That the ratings be based on three rates of flow:

(a). Low rating on ordinary minimum flow, defined as the natural or present flow available 95 per cent of the time, or approximate equivalent, with a statement as to the month of occurrence of the low flow;

(b). Middle rating based on median flow, defined as natural or present flow available 50 per cent of the time, or approximate equivalent;

(c). Average rating on arithmetical mean flow; but

(d). That it shall further be permissible to any country desiring it to report in addition ratings of Q75 and Q25 on the duration curve;

5. That the rating of storage be based on the water capacity and the gross head and be expressed in terms of theoretical kilowatt-hours of energy in the water stored;

6. That the rating of a developed site state the installed turbine capacity of the power plant expressed in kilowatts, and, in addition, that the rating of the site be made in the same manner as for an undeveloped site.

These recommendations are now being considered by the World Power Conference. Following action by them they will be considered by the sectional committee of ASA with a view to adoption as American Standard.

A37—Methods of Testing Road and Paving Materials

A37a-1930—Method of Test for Penetration of Bituminous Materials

A37b-1930—Method of Float Test for Bituminous Materials

A37c-1930—Method of Test for the Determination of Bitumen

Sponsor—American Society for Testing Materials.

Chairman—P. J. Freeman, chief engineer, Bureau of Tests and Specifications, Department of Public Works, Allegheny County, Pittsburgh, Pa.

Secretary—Prevost Hubbard, Asphalt Institute, New York.

(A5-1930—Method of Test for Toughness of Rock)

(A26-1930—Methods of Sampling Stone, Slag, Gravel, Sand, and Stone Block for Use as Highway Materials)

(A27-1924—Method of Test for

Apparent Specific Gravity of Coarse Aggregates)

The one general project, A37, and the three more specific projects, A5, A26, and A27, are all concerned with methods of testing road and paving materials and are under the supervision of one sectional committee, A37, with the American Society for Testing Materials as sponsor.

Prior to 1926, nearly all standards on road and paving materials which had been approved by ASA were submitted by the American Society for Testing Materials as existing standards. Cooperation between the A.S.T.M. and the principal consumers of road materials—such as the American Association of State Highway Officials, the American Society of Municipal Engineers, and the U. S. Bureau of Public Roads—was necessary to effect revisions. As this procedure was cumbersome, informal conferences of representatives of the four organizations mentioned above outlined a more comprehensive method for handling standardization work relating to road materials.

At a general conference of interested organizations called by ASA in 1926, it was decided that standardization of methods of testing road and paving materials should be coordinated through a sectional committee, with the A.S.T.M. as sole sponsor. In organizing the sectional committee, the A.S.T.M. took as a basis its own committee on road and paving materials (D-4), and added representatives of other organizations. The personnels of the A.S.T.M. Committee D-4 and the ASA Sectional Committee A37 are now identical.

Of the standards under the supervision of this sectional committee, A5 (A.S.T.M. D3-18) originally received approval as American Tentative Standard in 1921, A26 (A.S.T.M. D75-22) and A27 (A.S.T.M. D30-18) in 1924. In 1929, A37a, A37b, and A37c were approved as American Tentative Standards. In 1930, after favorable action by the sectional committee and the sponsor, all of these standards except A27 were advanced to the status of American Standard.

A38-1927—Steel Spiral Rods for Concrete Reinforcement

Sponsors—U. S. Department of Commerce, Bureau of Standards; Concrete Reinforcing Steel Institute.

Scope—Sizes of rods, diameters and pitches of spirals of stock steel spiral rods for concrete reinforcement.

The original simplified practice recommendation (SPR No. 53-26), covering sizes of steel spiral rods for concrete reinforcement, was approved by ASA in 1927 as American Standard. The National Bureau of Standards and the

Concrete Reinforcing Steel Institute were designated the sponsors of the project.

More recently, the Division of Simplified Practice of the National Bureau of Standards has asked producers, distributors, and users of concrete reinforcement to consider a new draft of this standard. In the proposed revision no changes have been made in the sizes of rods specified but a detailed table to assist purchasers has been added. When the proposed revision is approved by the Division of Simplified Practice, it is expected that it will be submitted to ASA for approval as a revision of the present American Standard.

A40—Standardization of Plumbing Equipment

Sponsors—American Society of Mechanical Engineers; American Society of Sanitary Engineering.

Chairman—William C. Groeniger, consulting sanitary engineer, Columbus, Ohio.

Scope—Standardization of plumbing equipment including materials, uniformity of roughing-in dimensions, efficiency of operation, and other performance specifications.

Subcommittee 1—Plumbing Code. This subcommittee, the personnel of which is the same as that of the Subcommittee on Plumbing of the Building Code Committee of the U. S. Department of Commerce, is revising its code which was published in 1929. As soon as revised copies are available they will be distributed to members of the sectional committee for consideration.

Subcommittee 4—Plumbers' Threads. See report on progress of Sectional Committee B2, Pipe Thread, ASA BULLETIN, February, 1932, page 67.

Subcommittee 5—Traps. The subgroup on Brass Traps held a meeting in March, 1931, where a series of definitions was recommended for adoption, and proposed standards for 1 $\frac{1}{4}$ - and 1 $\frac{1}{2}$ -inch Bent Tube P and S traps were developed.

Subcommittee 6—Brass Plumbing Products. The subgroup on Compression Cocks, Washer Screws, Faucets, and Tail Piece Parts worked out the following recommendations for the standardization of dimensions of faucets and connections: (a) handle screws; (b) seat washers or discs; (c) washer screws; (d) diameter of seat opening; and (e) certain external diameters and lengths. The proposal includes also certain standard dimensions developed and adopted by the former National Association of Brass Manufacturers for (f) basin faucet shank and tail piece, (g) bath faucet shank, (h) offset bath supplies, and (i) hose connections.

The report contained also a recommendation

that no attempt be made at the present time to set up a standard for the threads on the valve and faucet stems, this being opposed by the Manufacturers Standardization Society of the Valve and Fittings Industry.

It was decided that the proposal should be distributed for general criticism and comment.

A new subgroup was appointed to deal with minimum requirements for the alloys used in the manufacture of compression faucets and their parts. Another new subgroup is to develop standards for roughing-in dimensions for fixtures. On the other hand, the subgroup on waterworks brass goods was relieved from further activity on account of the fact that previous efforts made by the former National Association of Brass Manufacturers toward standardization of these products had been unsuccessful. The subgroup on valves was also discharged due to opposition of the Manufacturers Standardization Society of the Valve and Fittings Industry to the standardization of brass valves.

The subgroup on nomenclature developed a comprehensive list of terms used in the plumbing industry which was submitted to the subcommittee.

The subgroup on fixture connections and fixture valves, waste holes, plugs and connections, and overflows made recommendations to the subcommittee on the size of outlet openings in bath tubs; on diameter of flanges on spud and on waste ell on 1 $\frac{1}{2}$ -inch bath waste fitting; and on the height of bath curtain rods above the floor.

Subcommittee 7—Copper Water Tube Fittings. Comments received on the proposed American Standard on Brass Fittings for Flared Copper Tubes, dated October, 1930, which was published for general criticism and comment, were discussed in a meeting held in January, 1932. A revised draft is being prepared for submission to the members of the subcommittee.

Subcommittee 8—Cast Iron Soil Pipe and Fittings. This subcommittee was organized in January, 1931. Two subgroups were formed, one on nomenclature, and the other on materials, marking, and inspection. The latter decided to start its work on the basis of A.S.T.M. Specifications A74-29, on Cast Iron Soil Pipe and Fittings.

The subcommittee developed a proposed dimensional standard based on a tentative set of dimensions worked out by the Standardization Committee of the Soil Pipe Association with which the subcommittee is cooperating. In August, 1931, a questionnaire was distributed to the manufacturers of soil pipe requesting that they submit to the committee a list of pipe fittings now included in the Soil Pipe Associa-

tion's specifications, but which, in their estimation, could be excluded from the proposed American Standard. An investigation is also being made to determine whether it is practical to improve upon the design of certain fittings.

A41—Recommended Practice for Brick Masonry

Autonomous Sectional Committee

Chairman—George L. Lucas, New York.

In 1928, the Common Brick Manufacturers Association requested that ASA investigate the possibilities for developing a standard code for brick masonry. In their request they emphasized the growing demand for standard practices for brick masonry and stated that a research program by the National Bureau of Standards, which was then under way, would furnish data upon which a satisfactory code could be initiated.

Results of the canvass indicated that other organizations were also interested in recommended practices for brick masonry and ASA called a conference in June, 1928, at which 14 national bodies were represented. The decision of this conference was that such a project should be initiated, and a sectional committee organized. In October, 1928, the organization meeting was held and definite plans outlined. Several subcommittees were set up covering the following subjects: brick masonry materials, types of brick masonry, design of brick masonry, essentials of good workmanship, construction of brick masonry, fire resistance requirements, water penetration, durability or weathering, efflorescence and staining, data and information.

In April, 1930, extensive drafts covering the first two sections were presented to the subcommittee and some other sections had been arranged in outline form. The secretary of the sectional committee, Major L. B. Lent, who was chief engineer of the Common Brick Manufacturers Association, recently severed his connection with that organization. In consequence, the former active interest of Major Lent is no longer available to the committee. It is hoped that the Common Brick Manufacturers Association will shortly recommend a plan for the continuation of this most important project.

A42—Specifications for Plastering

Sponsors—American Institute of Architects; American Society for Testing Materials.

Acting Chairman—L. E. Kern, Mt. Vernon, N. Y.

Secretary—F. B. Stevens, Jr., Stevens Master Specifications, Inc., Chicago.

Scope—Specifications for interior cement, lime, and gypsum plastering, and for exterior plastering (stucco).

As a result of a request in 1928 from the Finishing Lime Association of Ohio to develop standard specifications for finishing hydrated lime plaster, opinions were expressed by the American Society for Testing Materials and the American Institute of Architects that it might be desirable for the scope of such a project to include other plastering processes. Shortly afterward the A.S.T.M. suggested to ASA that a sectional committee be organized to prepare specifications for cement, lime, and gypsum plastering, with the American Institute of Architects and the American Society for Testing Materials as joint sponsors. The original intention was to confine the scope of the project to details of practice for inside plastering and not to include exterior or stucco work. After acceptance of these modifications by the bodies concerned, initiation of the project was approved by ASA. Later, the scope was amended to include exterior as well as interior plastering.

Organization of the sectional committee had been delayed due to the fact that the man originally selected as chairman was unable to serve and subsequently resigned. However, the ASA has recently been advised by the A.S.T.M. that certain subcommittees have been set up; of these the Subcommittee on Lime Plastering under the chairmanship of J. A. Murray has already reported some progress in the preparation of specifications for lime plastering. A meeting of the sectional committee will be held in the near future to coordinate the plans outlined for the subcommittees.

A43-1930—Specifications for Putty

Sponsor—U. S. Department of Commerce, Federal Specifications Board.

Scope—Specifications covering composition, sampling, and methods of analysis.

This standard, Federal Specifications Board No. 283, U. S. Government Master Specifications for Putty, was approved as American Tentative Standard in 1930 and the National Bureau of Standards was invited to serve as sponsor. Its submittal as an existing standard in 1928 was followed by a period of consideration prior to its approval.

On January 5, 1931, ASA received a proposed revision of Federal Specifications for Putty. Changes made in the previous document were largely in the nature of explanations, with the exception of one technical change in the prescribed testing methods. This document was approved for promulgation by the Federal Specifications Board on April 15, 1931, to become effective to all government departments and independent establishments of the government not later than October 15, 1931, and was reprinted by the Federal Standard Stock Catalog

Board, with the following designation: TT-P-791. No formal action on this revision has as yet been taken by ASA.

A44—Method of Test for Organic Impurities in Sands for Concrete

A45—Method of Test for Sieve Analysis of Aggregates for Concrete

Sponsor—American Society for Testing Materials.

In 1929, the American Society for Testing Materials submitted Method of Test for Organic Impurities in Sands for Concrete (A.S.T.M. C40-27), and Method of Test for Sieve Analysis of Aggregates for Concrete (A.S.T.M. C41-24), with a request for their approval as American Tentative Standard under the proprietary method. Subsequent investigation indicated that certain technical points were objected to by a cooperating body. These particular points had not been presented to A.S.T.M. Committee C-9 on Concrete, which committee has jurisdiction over these two standards. In consequence, action by ASA has been deferred until further consideration is given by the A.S.T.M. to these objections.

A47-1932—Steel Reinforcing Bars

This standard, previously published by the Bureau of Standards as Simplified Practice Recommendation R26-30, was submitted to ASA by the Concrete Reinforcing Steel Institute and the Bureau of Standards, jointly, for approval as an American Standard. It was approved as an existing standard on January 11, 1932. The standard covers 11 cross-sectional areas for steel reinforcing bars ranging from 0.05 to 1.56 sq in.

A48—Forms for Concrete Joist Construction Floors

The Simplified Practice Recommendation R87-29, Forms for Concrete Ribbed Floor Construction, was submitted to ASA in 1931 by the Concrete Reinforcing Steel Institute and the Bureau of Standards, jointly, for approval as an American Standard under the rules governing existing standards. While this request was under consideration by ASA, a proposed revision of the specifications was formulated at a meeting of the groups having a major interest in the subject, and was sent out to industry for approval. ASA will give the matter renewed consideration when the result of this canvass, which is being made by the Bureau of Standards, becomes known. The proposed revised title of the specifications is Forms for Concrete Joist Construction Floors.

Committee to Standardize Lathe Tool Nomenclature

There is a great need for standardization of nomenclature of lathe tools. On behalf of a foreign national standardizing body engaged in establishing a draft standard on this subject and desirous of learning about terminology adopted in other countries, the ASA office recently sent out to a number of American experts a questionnaire showing sketches of the most commonly used shapes of lathe tools, with the request that they indicate the names by which they would designate the respective tools. The replies received showed a surprising divergence. Not only were different designations used for the particular function of the tools, but what was more important, even the designations "left-hand" and "right-hand" were not used in the same manner. What was called a "right-hand straight turning tool" by one expert, was designated by another as a "left-hand straight roughing tool." A tool called in one reply a "left-hand side boring tool" was called a "right-hand hook tool" in another, and again, a "right-hand boring tool" in a third reply.

It seems that the problem concerned might well be solved independent of the question whether or not dimensional standardization of the tools should be undertaken. In fact, the least that could be done is to avoid the confusion resulting, for example, from a user of roughing tools ordering a "right-hand" type and receiving what he calls the "left-hand" type, simply because the manufacturer uses the two terms the other way around. Incidentally, nomenclature for milling cutters has been well taken care of in the American Standard B5c-1930, including such terms as "right-hand" and "left-hand." The establishment of such a set of definitions, therefore, seemed to be equally desirable for a simple but widely used object like a lathe tool.

The matter was brought to the attention of Sectional Committee B5 on Small Tools and Machine Tool Elements, and at its meeting held on December 2, 1931, in New York, it was decided to organize a new Technical Committee 16 on Nomenclature. This committee consists of Harry E. Harris, chairman; F. S. Blackall, Jr., secretary; Frank O. Hoagland; and Chester B. Lord. The committee has suggested that a fifth member be appointed by the chairman of the sectional committee, this member to be some outstanding manufacturer of tools and tool bits for lathes, planers, etc.

The new committee held its first meeting in New York on December 4, 1931, and framed an outline of the general principles of its work as a recommendation to the executive committee of the sectional committee.

J. G.

Interim Changes in the National Electrical Code

The proposed interim changes in the National Electrical Code (C1-1931) which were discussed on page 83 of the February issue of the ASA BULLETIN have been disposed of as indicated below.

The first change proposed covered an amendment to paragraph d of Section 1402 of the 1931 edition of the Code and was not approved since it failed to receive the specified two-thirds favorable vote of the members of the committee having the Code in charge. The whole discussion of this proposed revision has been formally referred to the subcommittees on Article 6—Conductors, and on Article 14—Fixtures, Lamp-Holding Devices, Plug Receptacles and Other Outlet Devices, for appropriate recommendation to the next meeting of the entire committee.

The second proposed interim revision has been approved. The several paragraphs covered by this revision as amended will read as follows:

Paragraph h, Section 1701, Article 17.—Where insulated wire is used for connections between resistance elements and a contact device of a rheostat, except for motor-starting service, the insulation shall be of asbestos-covered (Type A) or of the slow-burning (SB) type.

Paragraph l, Section 3102, Article 31. (Change first sentence only.)—Wires between main circuit resistors and the back of control panels shall be asbestos-covered (Type A) or of the slow-burning (SB) type, as prescribed in Section 1701, paragraph h, of this code.

Paragraph h, Section 3604, Article 36.—Approved asbestos-covered (Type A) or approved slow-burning wire (Type SB) shall be used for wiring the border.

Paragraph d, Section 3903, Article 39. (Change first sentence only.)—The common return wire shall not be smaller than No. 14; shall be of either the rubber-covered (Type R), the asbestos-covered (Type A), or the slow-burning (SB) type and shall not be contained in the cable.

In accordance with the usual procedure of this code for interim changes, the above changes will be reported to the next meeting of the sponsor body—the National Fire Protection Association—which is to be held in Atlantic City in May, and thereafter to the American Standards Association.

A.S.C.E. Withdraws Projects for Steel Railway Bridges

The American Standards Association has been advised by the American Society of Civil Engineers of the Society's decision to withdraw standardization projects on steel bridges listed below. These specifications were originally submitted to ASA by the A.S.C.E. in 1923 and 1924 with a request for their approval as existing standards, but as a result of further consideration by all interested parties, the Society has withdrawn its submittal of these projects. The projects are:

Specifications for Design and Construction of Steel Railway Bridge Superstructure (A3b)

Specifications for Design and Construction of Steel Highway Bridge Superstructure (A34)

Method for Classifying Coals Proposed at Meeting

An important progress report covering a proposed scheme of classifying coal on the basis of ash-free calorific value and fixed carbon was submitted by the technical committee on Scientific Classification at the annual meeting of the Sectional Committee on Classification of Coals (M20) held in New York on February 16. A chart was shown in which the various ranks of coal ranging from lignite to anthracite were plotted according to Btu and fixed carbon. The chart clearly showed that the Btu decreased with the rank of the coal. The sectional committee voted to request the Subcommittee on Proposed Methods of Classification to present at the next meeting of the sectional committee a systematic grouping of American coals with the limiting figures for Btu and fixed carbon for each class of coal.

On Monday, February 15, preceding the meeting of the Coal Classification Committee, an all-day symposium on coal classification was held as part of the program of the annual meeting of the A.I.M.E. Results of important investigations made under the auspices of the committee were presented in a series of 12 papers dealing with the physical and chemical properties of coals and the requirements of coal for various uses. The information given in these papers provides a background of data and facts upon which the classification of American coals can now proceed. It is expected that considerable progress will be made in the next 12 months.

At the meeting of the Sectional Committee on

Classification of Coals, all of the officers of the committee were re-elected for a term of two years. The officers are:

A. C. Fieldner, chief engineer, Experiment Stations, U. S. Bureau of Mines, Washington, D. C., representing the American Society for Testing Materials, *chairman*

Walter R. Addicks, vice-president, Consolidated Gas Company, New York, representing the American Gas Association, *vice-chairman*

C. B. Huntress, executive secretary, National Coal Association, Washington, D. C., *secretary*

W. H. Fulweiler, United Gas Improvement Company, Philadelphia, was elected to fill a vacancy on the Executive Committee.

National Terra Cotta Society Withdraws Project

The National Terra Cotta Society has informed the American Standards Association that it is unable to carry on the project for Architectural Terra Cotta and Methods of Setting (A24). ASA has been requested to drop this project from its current list. When business conditions improve, the National Terra Cotta Society expects to be able to resume the active development of standards in this field.

Foreign Standards Available from ASA

The following are new foreign standards available to Sustaining-Members for loan or purchase through the ASA office. In requesting copies of the standards it is necessary to list only the ASA serial numbers preceding the titles.

ASA
Serial
Number

Germany

- 74. Bracket insulator series HD for overhead power lines operating voltage 0.5 to 35 kV
- 75. Bracket insulator series HW for overhead power lines operating voltage 0.5 to 35 kV
- 76. Bracket insulator series VHD reinforced for overhead power lines operating voltage 0.5 to 35 kV
- 77. Bracket insulator series VHW reinforced for overhead power lines operating voltage 0.5 to 35 kV

- 78. Cap insulator series K for overhead power lines
- 79. Compressed air equipment for cars, tip valve for single valve gear connection and installation dimensions
- 80. Deep pots, steel sheet enameled
- 81. Full core insulators series MK for overhead power lines
- 82. Hammer for horse shoeing, hand tools
- 83. Hood clamp connection dimensions, automobile construction
- 84. Jacquard machines, prism profile for Chemnitz coarse tapping and French fine tapping
- 85. Lightning conductor condensor plate
- 86. Lightning conductor ground plate
- 87. Lightning conductor lightning rods
- 88. Lightning conductor, lightning rod with connection plate
- 89. Lightning conductor pipe grounding
- 90. Lightning conductor roof passage
- 91. Lightning conductor separator piece
- 92. Lightning conductor smoke stack guard pole
- 93. Lightning fastening anchor for lightning rod, form C following DIN VDE 1804
- 94. Lightning grounding
- 95. Machine pots, steel sheet enameled, household economy
- 96. Paper tubes for mule spindles
- 97. Plate holders for insertion, insertion dimensions, photography
- 98. Roller bearing axle shafts with port nut screw for cars
- 99. Shuttle, lower springs, filling spools for silk filling cops, quills, for silk weaving
- 100. Shuttle points
- 101. Shuttle spindles
- 102. Steel shafts, drawn or turned, dressed and polished
- 103. Stewing pot, steel sheet enameled, household economy
- 104. Switch symbols and wiring diagrams for electric power plants, indoor installations
- 105. Table rod for sick bed DIN FANOK 1, for child's bed DIN FANOK 2, for infant's bed DIN FANOK 8 and DIN FANOK—
- 106. Tubes for parallel crosswound bobbins

Great Britain

- 107. Asphaltic bitumen road emulsion
- 108. Cold asphalt macadam
- 109. Forge welded steel air receivers
- 110. Granite and whinstone kerbs, channels, quadrants and sets
- 111. Manila ropes for general purposes
- 112. Manila ropes for well drilling
- 113. Milling cutters and reamers
- 114. Riveted steel air receivers
- 115. Solid drawn steel air receivers